This listing of claims replaces all prior versions, and listings, of claims in the present application.

<u>COMPLETE LISTING OF CLAIMS IN ASCENDING ORDER WITH STATUS INDICATOR</u>

1. (Currently amended) A method of operating an inspection apparatus to inspect a device used in a manufacturing process, said method comprising the steps of:

scanning the device;

displaying a plurality of images corresponding to respective areas of the device;

selecting at least two of the plurality of displayed images <u>based on an input by a user of the inspection apparatus</u>;

deriving a spatial relationship between the selected images; and

forming a pattern to be recognized on the device from the selected images and the derived spatial relationship.

2. (Original) The method of claim 1 further comprising the step of storing information associated with the selected images and the derived spatial relationship on a computer readable medium of the inspection apparatus.

3. (Original) The method of claim 2 further comprising using said stored selected images and the stored derived spatial relationship in a pattern recognition analysis to detect defects in the device.

4. (Original) The method of claim 2 further comprising using said stored selected images and the stored derived spatial relationship in a pattern recognition analysis to detect desired patterns in the device.

5. (Currently amended) The method of claim 1 wherein said selecting step comprises:

displaying at least two image selection windows with the displayed images; and

inputting data corresponding to the selected images in response to the user placing the at least two image selection windows over respective displayed images.

6. (Original) The method of claim 5 wherein the image selection windows are placed over images corresponding to properly formed areas of the device.

7. (Original) The method of claim 5 wherein the image selection windows are placed over images corresponding to defectively formed areas of the device.

8. (Currently amended) The method of claim 5 wherein [[a]] the user of the apparatus is prompted for a number of image selection windows to be displayed.

9. (Currently amended) The method of claim 1 wherein said selecting step comprises:

displaying an image selection window with the displayed images;

<u>inputting data corresponding to one of the selected images in response to the user</u> placing the image selection window over a displayed image;

determining if another image selection window is required; and

if another image selection window is required, repeating said steps of displaying an image selection window, <u>inputting data corresponding to one of the selected images</u> ~~placing the image selection window over a displayed imag~~e and determining if another image selection window is required.

10. (Original) The method of claim 9 wherein the image selection windows are placed over images corresponding to properly formed areas of the device.

11. (Original) The method of claim 9 wherein the image selection windows are placed over images corresponding to defectively formed areas of the device.

12. (Original) The method of claim 1 wherein the device is a semiconductor wafer.

13. (Original) The method of claim 12 wherein the areas are contacts formed in the wafer.

14. (Currently amended) The method of claim 13 wherein the contact areas have desired and undesired features and said selecting step comprises:

displaying at least two image selection windows with the displayed images; and

inputting data corresponding to the selected images in response to the user placing the at least two image selection windows over images associated with the desired features of the contact areas.

15. (Currently amended) The method of claim 13 wherein the contact areas have desired and undesired features and said selecting step comprises:

displaying at least two image selection windows with the displayed images; and

inputting data corresponding to the selected images in response to the user placing the at least two image windows over images associated with the undesired features of the contact areas.

16. (Currently amended) The method of claim 13 wherein the contact areas have desired and undesired features and said selecting step comprises:

displaying an image selection window with the displayed images;

<u>inputting data corresponding to one of the selected images in response to the</u>

<u>user</u> placing the image selection window over an image associated with the desired

feature of a contact area;

determining if another image selection window is required; and

if another image selection window is required, repeating said steps of

displaying an image selection window, <u>inputting data corresponding to one of the</u>

<u>selected images</u> ~~placing the image selection window over an image associated with a~~

~~desired feature~~ and determining if another image selection window is required.

17. (Original) The method of claim 1 wherein the device is a reticle.

18. (Original) The method of claim 1 wherein the derived spatial relationship

comprises respective spatial relationships between pairs of the selected images.

19. (Currently amended) A method of inspecting a semiconductor wafer

having objects formed therein, said method comprising the steps of:

scanning the wafer;

displaying a plurality of images corresponding to respective areas in the

wafer;

selecting at least two of the plurality of displayed images <u>based on at least</u>

<u>one selection by a user of an inspection apparatus;</u>

deriving a relationship between the selected images; and

forming a pattern to be recognized on the wafer from the selected images and the derived relationship.

20. (Original) The method of claim 19 further comprising the step of storing information associated with the selected images and the derived relationship on a computer readable medium of the inspection apparatus.

21. (Original) The method of claim 20 further comprising using said stored selected images and the stored derived relationship in a pattern recognition analysis to detect defects in the wafer.

22. (Original) The method of claim 20 further comprising using said stored selected images and the stored derived relationship in a pattern recognition analysis to detect desired patterns in the wafer.

23. (Currently amended) A method of inspecting a semiconductor device having objects formed therein, said method comprising the steps of:

scanning the device to obtain scanned object images;

selecting at least two of the scanned object images; and

forming a pattern to be recognized on the device from the selected images

and a spatial relationship between the images, wherein features that are not to be

included in the pattern to be recognized are filtered out during said selecting step.

24. (Currently amended) An inspection apparatus for use in inspecting a

manufacturing device used in a manufacturing process, said apparatus comprising:

a scanning device, said scanning device obtaining images of the

manufacturing device;

a display;

an input device to be manipulated by a user; and

a processor coupled to said scanning device, said display and said input

device, said processor controlling said scanning device to scan the manufacturing

device, said processor displaying on said display a plurality of images corresponding to

respective areas of the manufacturing device, said processor inputting at least two user

selected images from the input device, deriving a spatial relationship between the user

selected images and forming a pattern to be recognized on the manufacturing device

from the user selected images and the derived spatial relationship.

25. (Currently amended) The apparatus of claim 24 further comprising:

a computer readable storage medium coupled to said processor, wherein said

processor stores information associated with the <u>user</u> selected images and the derived

spatial relationship on said computer readable medium.

26. (Original) The apparatus of claim 25 wherein said stored selected images

and the stored derived spatial relationship are used by the processor in a pattern

recognition analysis to detect defects in the manufacturing device.

27. (Original) The apparatus of claim 25 wherein said stored selected images

and the stored derived spatial relationship are used by the processor in a pattern

recognition analysis to detect desired patterns in the manufacturing device.

28. (Currently amended) The apparatus of claim 24 wherein said processor

inputs <u>the user</u> selected images by displaying on said display at least two image

selection windows with the displayed images and <s>inputs</s> <u>inputting</u> data corresponding

to images selected by the <u>user by placement of the</u> selection windows via said input

device.

29. (Currently amended) The apparatus of claim 28 wherein [[a]] <u>the</u> user of

the apparatus is prompted for a number of images windows to be displayed.

30. (Currently amended) The apparatus of claim 24 wherein said processor

inputs <u>the user</u> selected images by displaying an image selection window on said

display with the displayed images <s>inputs</s> <u>inputting</u> data corresponding to images

selected by the <u>user by placement of the</u> image selection windows via said input device,

~~determines~~ <u>determining</u> if another image selection window is required, and if another

image selection window is required, ~~continues~~ <u>continuing</u> to display an image selection

window, inputt<u>ing</u> data and ~~determines~~ <u>determining</u> if another window is required

until no further windows are required.

31. (Original) The apparatus of claim 24 wherein the manufacturing device is

a semiconductor wafer.

32. (Original) The apparatus of claim 31 wherein the areas are contact areas

formed in the wafer.

33. (Original) The apparatus of claim 24 wherein the manufacturing device is

a reticle.

34. (Original) The apparatus of claim 24 wherein the derived spatial

relationship comprises respective spatial relationships between pairs of the selected

images.

35. (Currently amended) An inspection apparatus for use in inspecting a

semiconductor wafer, said apparatus comprising:

a scanning device, said scanning device obtaining images of a wafer;

a display;

an input device <u>for use by a user of the apparatus</u>; and

a processor coupled to said scanning device, said display and said input device, said processor controlling said scanning device to scan a wafer, said processor displaying on said display a plurality of images corresponding to areas of the scanned wafer, said processor inputting at least two <u>user</u> selected images from the input device, deriving a relationship between the <u>user</u> selected images and forming a pattern to be recognized on the scanned wafer from the <u>user</u> selected images and the derived relationship.

36. (Original) The apparatus of claim 35 further comprising:

a computer readable storage medium coupled to said processor, wherein said processor stores information associated with the selected images and the derived relationship on said computer readable medium.

37. (Original) The apparatus of claim 36 wherein said stored selected images and the stored derived relationship are used by the processor in a pattern recognition analysis to detect defects in the scanned wafer.

38. (Original) The apparatus of claim 36 wherein said stored selected images and the stored derived relationship are used by the processor in a pattern recognition analysis to detect desired patterns in the scanned wafer.

39. (Currently amended) An inspection apparatus for use in inspecting a

semiconductor wafer, said apparatus comprising:

a scanning device, said scanning device obtaining images of a wafer;

an input device for use by a user of the apparatus; and

a processor coupled to said scanning device and said input device, said

processor controlling said scanning device to scan a wafer, said processor inputting at

least two user selected images from the input device and forming a pattern to be

recognized on the scanned wafer from the user selected images and a spatial

relationship between the images.